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EXTENSIVE SLOUGHES.

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IN the report of the Eastern Michigan Asylum for the biennial period ending September 30th, 1882, Dr. Hurd, discussing the subject of paretic dementia, alluded to the occurrence of extensive sloughs as apparently producing an amelioration in the symptoms of two cases which were admitted at a stage of the disease when it seemed that no improvement was possible, and as these cases were regarded by many of interest, it is thought best to report them at length, and collate them with others previously reported. Cases in which improvement in paretic dementia occurred subsequent to inflammatory processes, artificially produced or occurring naturally, are far from exceptional in the literature. Esquirol¹ reports a case of recovery subsequent to the appearance of three crops of furuncles which resulted in abundant suppuration; the patient improved from this time, and remained in apparently good health till the time of his death which occurred five and a half years after from cerebral haemorrhage. Bail-larger² reports the case of a paretic dement who was fast passing into extreme dementia when he was suddenly attacked by successive crops of furuncles, which gave rise to a seemingly exhausting suppuration. From the time

¹ Maladies Mentales.

² Annales Médico-Psychologiques, 1849.

of their appearance the patient improved mentally, and was finally lost sight of, apparently recovered. Pliny Earle¹ has had under observation a case which recovered in consequence of a seton in the neck and numerous body wounds setting up abundant suppuration.

Baume² has reported a case of recovery which came on subsequent to a slough of the leg, and which had lasted, when lost sight of, six years. He also reports another case in which an acute œdema of the leg, followed by gangrene and sloughing, produced improvement and seeming recovery; the patient being too soon lost sight of to speak positively on the last point. Baillarger,³ some years subsequent to the date of the case cited, reported recovery in a female paretic dement secondary to a large abscess affecting the right leg, which recovery had lasted more than a year when the patient passed from observation. Morel⁴ has reported a case in which an extensive hepatic abscess was followed by recovery from paretic dementia.

Combes⁵ has had under observation a case of paretic dementia in which improvement and recovery followed upon suppuration in the middle ear. Baillarger⁶ and Fabre⁷ have each reported a case in which recovery from paretic dementia occurred in consequence of a thigh amputation followed by abundant suppuration, and a very similar case is cited by Voisin.⁸ M. J. Christian⁹ reports two cases of paretic dementia in which the mental and motor symptoms disappeared together, after extended suppuration.

¹ Amer. Journ. of the Med. Sciences, 1856.

² Thèse de Paris, 1850.

³ Annales Médico-Psych., 1854.

⁴ Maladies Mentales.

⁵ Thèse de Paris, 1856.

⁶ Annales Médico-Psych., 1856.

⁷ Ibid., 1857.

⁸ Op. cit.

⁹ Annales Médico-Psychologiques, 1880.

Vallon¹ says: Traumatism of the soft parts in paretic dments often gives rise to abundant suppuration and, whether followed by suppuration or not, often exercises a beneficial influence on the paretic dementia. Nasse² has reported a case in which recovery from paretic dementia occurred secondary to small-pox. Fritsch³ has reported a case of improvement after erysipelas. Kiernan⁴ and Madigan⁵ have reported cases in which crops of abscesses following upon vaccination in paretic dments temporarily ameliorated the psychosis. Savage⁶ has reported marked amelioration in a general paralytic following a severe carbuncle. The cases to which I desire to call attention are as follows.

CASE No. 1.—Male, age 40; married, native of Michigan; formerly hotel proprietor and of average business capacity. His mother was intemperate and her family were subject to phthisis. He himself was formerly intemperate and licentious; had been reckless and improvident in his expenditures, and led a fast life. After marriage he reformed and became sober and industrious, but did not succeed in accumulating property. No history of syphilis. He was admitted to the Eastern Michigan Asylum in the early part of *December*, 1880, and had at that time been suffering from mental infirmity for upwards of two years. In the first stage of his disease he was depressed and idle and indifferent to business. In this condition he remained for a year, at the expiration of which time he developed delusions of grandeur. He acquired flesh meanwhile and his bodily health improved, but his mind grew progressively weaker. Previous to admission he

¹ Thèse de Paris, 1882.

² Irrenfreund, 1870.

³ Jahrb. für Psychiatrie, B. iii.

⁴ AMERICAN JOURNAL OF NEUROLOGY AND PSYCHIATRY, 1883.

⁵ Chicago Medical Review, vol. iv.

⁶ Journal of Mental Science, vol. xxvi.

had remained in bed for several weeks and had shown a great tendency to sleep.

He was received in the advanced stages of paretic dementia, his condition being as follows. Weight one hundred and seventy-seven pounds; height medium; bodily health fair; eyes and hair light; pupils contracted but unequal, the right being the larger; skin dry; temperature 99°; articulation thick and indistinct; gait ataxic, expression dull and sleepy, fine facial lines absent. He replied to questions in a drawling way showing slow and imperfect mental action. At times his replies were wholly irrelevant and meaningless. He entertained delusions of grandeur and thought himself in perfect health.

For about one month after admission he was depressed. Much of the time he sat quietly alone, apparently engaged in reading. Again he showed stupidity and torpor; was dull, anxious to go to bed, and would fall asleep even while eating. Extreme debility and paresis were present. He required assistance in dressing and constant personal attention. His articulation was clumsy and his mental action weak. This condition passed over into elation. He became mischievous, threw clothing from the windows, ransacked bureau drawers, and appropriated property belonging to others. Finally, he grew so annoying, and his presence became such a source of discomfort to quiet patients, that he was transferred to a hall occupied by those who were disturbed. He uttered delusions of an extravagant nature.

January, 1881. On the 6th of this month, he sustained an apoplectiform seizure accompanied with choreiform movements of the head, twisting of the mouth, protrusion of the tongue, and tossing of the arms. Temperature in the axilla 103°; pulse rapid; pupils contracted; movements of the arms could be restrained by holding. He was treated by the use of bromide mixture and chloral, slept a little,

and on the following morning was able to take breakfast. 10th. Continues in bed, but is fairly comfortable, no return of convulsive movements. He is eating well and feeling "first-rate."

Reg. prescription, barium chloride, gr. 3; cinchonidia sulph., gr. 2. 14th. He sits up and pretends to read a paper. 21st. Visited by an old acquaintance. He does not appear to know him. His habits are excessively untidy. 28th. Transferred to a hall occupied by quiet demented patients.

February. Able to be about, quiet but extremely feeble in mind, inclined to sit alone, inappreciative of what is said to him; replies drawling and indistinct, gait feeble. He has sudden impulses to do violence, and has injured his hand by striking out a glass. His handwriting at this period is totally illegible.

March. Is again elated and extravagant. He forms strange intimacies; has several fast friends among feeble minded patients to whom he promises work at immense wages.

During *April* he suffered from rheumatoid affection of the joints (arthropathic) of tedious progress. He was confined to bed and grew debilitated. There was tendency to engorgement of the right lung. Treatment in the main supporting. Rapid improvement in these symptoms followed the use of cinchonidia salicylate prescribed in the latter period of the affection.

May. Is able to be about.

June. Is better mentally than at any time since he came under treatment: is quiet, appreciative, and able to care for himself. He attends chapel and entertainments, is neat in dress, and shows a disposition to assist in work; can remember names. The improvement followed the formation of a large gangrenous slough on the left heel

¹ Sheppard: "The verbal formula of a hopeless malady."

which developed in consequence of the lowered vitality of the part and the effect of position during his late illness. His articulation and gait are much better. He copies from a newspaper as follows:

The Hannibal and Joseph road is making contracts for live stock from Kansas city to Chicago at \$45 per car when the tariff rate is 960.

Continues to take cinch. salicylate in pill form gr. iiss. t. i. d.

July. Brought forward to the reception, or second convalescent, hall. He is able to write letters. His mind is quite clear. He is contented and cheerful. There is no trace of delusions.

August. Brought forward to the convalescent hall. He thinks himself well enough to be discharged, but is not strenuous about going away. He writes as follows:

The Chicago nine beat the Detroit club by 17 to 10 Providence defeated Boston by 12 to 6 and Buffalo laid out Cleveland by 8 to 7

September. He is industrious and pleasant; enjoys the freedom of the grounds; plays croquet and takes regular walks in the open air; has been taking a bitter tonic which is now discontinued. He has had one attack of indiges-

tion during the month, but otherwise has been well; has grown fleshy.

October. Progressive mental improvement. He is quite proud of his ability to write and gives several specimens of left-handed penmanship.

November 1881. During the month he had two attacks of indigestion which produced considerable temporary prostration. Reg. prescription bitter tonic, 3 ij.; acid phosphate, 3 i. He is extremely industrious. 25th. Removed by his wife on trial. She regards him well. He believes himself fully restored to health. His mind is not strong, but the progress of his disease seems arrested.

After his return home, he was employed in the care of horses in connection with a hotel. He had limited endurance, but was able to contribute materially to his family's support.

In December, 1882, thirteen months after his discharge, he visited at the Asylum, when the following note was made of his condition: "He is in good flesh and seems as well mentally as when he left the Asylum. He says he is at present out of employment, but that he has worked more or less since his discharge. He exhibits a pleasant interest in the institution. Until recently he has had no trouble with the heel on which the slough appeared. Lately he has on several occasions experienced pain in the cicatrix."

Present condition, April 3d, 1884. He has improved mentally. He states that he has been out of employment but a few months since he left the Asylum. He is troubled with catarrh, but further than this is in good bodily health. He has not required any medicine. Weight about 165 pounds. There is not a trace of paresis in his speech or gait, and his hand-writing shows no irregularity. He has full control of a livery stable and earns good wages. He

keeps his employer's books with accuracy, is correct in his accounts, turns over the proper amount at each time of settlement, and performs efficiently all the duties assigned him. His memory for both remote and recent events is good. His relatives notice that his disposition is not what it formerly was. Once he was passionate, somewhat irritable, and quick-tempered. Now he is invariably good-natured. His habits are perfectly temperate and regular. His hand-writing is unusually legible and uniform.

CASE No. 2.—Male, age thirty-seven, lawyer; hereditary tendency to mental disease denied; no history of syphilitic infection. He used tobacco excessively and had been licentious; habits otherwise correct; disposition genial; temperament sanguine. He showed ability as an attorney and was moderately successful from a financial point of view.

When admitted to the Eastern Michigan Asylum, in *July*, 1881, the statement was made that he had been breaking down for about one year. He had made a show of practising his profession, however, up to within a few weeks before his admission. Mental disturbance was first manifested through an inordinate sexual desire and the existence of extravagant delusions. He gratified his passions by natural as well as unnatural methods, and required constant attention to prevent masturbation. A few days before admission, he became violent, and required to be placed in jail. He believed he could make gold and diamonds, and that he had been commanded to "raise a new Jesus and to be a Joseph." He was brought to the institution by an officer who reported that his conversation was very filthy, and related almost exclusively to the carnal relation of the sexes.

Condition on admission as follows: height 5' 11", weight 139 pounds: anaemic: personal appearance untidy; temperature normal; pulse 96, small, irregular, and feeble;

bodily health apparently reduced, though it was stated that he was as well as for several months before ; expression confused ; absence of fine lines of the face ; pupils equal and contracted ; skin soft and moist ; tongue pale ; speech drawling and thick ; gait ataxic ; mental action confused ; slight incoherency. He stated that his hearing was poor in consequence of concussion of the brain while in the army ; was extravagant in conversation and entertained impracticable business schemes of great magnitude. His manner was dull and preoccupied, and his expression of countenance indicated mental impairment. He was shockingly profane in conversation, and when remonstrated with on this account, used foul language.

He remained bewildered several days after admission ; desired to go away to look after his railroads ; was inclined to lie down, to overturn beds, to pound on doors, to injure furniture, and to remove his clothing. He rummaged in bureaus, collected property belonging to others, and destroyed library books.

July 24th. Restless ; says he loses thousands of dollars by being here ; is still inclined to noisy demonstrations and requires to be transferred to a hall for disturbed patients ; pupils small and do not respond readily. Reg. prescription, barium chloride, grs. 2 ; hyoscyamin, gr. $\frac{1}{4}$.

August 4th. Weight, 138 pounds. He is less confused and quieter. He has had a ravenous appetite. A diet consisting mainly of potato with, as far as practicable, a withdrawal of highly phosphorized foods, is prescribed.¹

7th. Transferred to a quiet hall. He says that he has a

¹ In the *Journal of Mental Science*, vol. xxii., page 82, Dr. Isaac Ashe, under the head "Some Observations on General Paralysis," cites the taking of highly phosphorized diet as an important factor in the causation of paresis and alludes to the almost complete absence of this malady in Ireland where the potato forms the main food. With a view to ascertaining the relations of the withdrawal of phosphorized foods to the progress of the disease, this regimen was adopted.

great invention for tubular locomotion. This consists of two glass balls twenty-two inches in diameter. One ball is fastened to a pole; the other is "a solid globe, with the exception of four little holes for the admission of air and water where the friction occurs." The "capacity" of this apparatus is one thousand miles a minute. His conversation is incoherent and he speaks of going "to the end of the universe at the end of a spark." The idea about his apparatus he claims to have got from the "American Industrial Institution at Hartford." Pulse 84 and more regular; both pupils contracted, but the right one a trifle larger than the left; tongue coated white; skin dry; appetite good. He passes urine regularly and the quantity is large; is wakeful at night.

His hand-writing shows tremulousness and irregularity in the construction of letters, as well as confused mental action.

He claims that writing too much has broken him down, and for the first time shows some appreciation of the fact that he is not well.

Electricity used as follows: the constant current, eight cells strength, applied to the head; the same, of sixteen cells strength, to the spine; to the extremities the secondary current. During the passage of the current through the negative pole in the auriculo-maxillary fossa to the vertex, he complained of haziness of vision, as though he were looking through steam. Cold sponging employed night and morning. After two electrizations made on the 4th and 10th of August respectively, it was observed that his pupils were a trifle larger and his skin decidedly cooler.

August 15th. Tendon reflex cannot be obtained, owing to muscular rigidity. His tongue deviates slightly to the right and is coated; pulse 90 and somewhat feeble; skin cool and pupils contracted; temperature $98\frac{1}{2}^{\circ}$; mental action more

feeble; is unable to follow the simplest directions in regard to dressing and undressing; is totally unable to work; is restless and constantly inclined to go about from one bed to another, lying in each one. 17th. Habits very filthy; is noisy, loquacious, and confused. He talks and laughs to himself. 18th. He can neither dress nor undress himself properly. His conversation is, for the most part, incoherent and meaningless. He is very erotic and talks much about the female sex. Pulse 96; temperature normal; skin cool; pupils contracted; tongue tremulous; appetite good. 27th. Electricity, which has been used once in three or four days in the manner above referred to, is discontinued. He has steadily lost ground and has become very noisy and mischievous. Is greatly disturbed at night and requires an hypnotic regularly. 29th. He requires to be returned to a hall for disturbed patients.

September. He masturbates openly, and his excitement is increased by this cause. He is prone to remove his clothing and quickly strips himself to the very skin, unless carefully observed. He believes he is Jesus Christ. There has been no decline in bodily health; his weight continues at 138 pounds.

October. During the latter part of *September*, and for the first few days of *October*, he suffered from retention of urine. The bladder was relieved twice daily by the introduction of the soft catheter. On the afternoon of the 2d, he sustained a mild paretic attack. He became pale, weak, and momentarily unconscious; required to be placed in bed and to receive a stimulant. Reg. prescription, cinchonidia sulphate grs. ii. t. i. d. On the following day, (3d) was found to have an inflamed testicle, and was kept in bed. He took food poorly and was feeble. On the 4th his pulse was rapid and weak. He refused medicine; took no solid food, but drank milk. 5th. Cystitis developed. A large amount of muco-pus is mixed

with the urine. Opiates are given conjoined with mild diuretics and demulcent drinks. *6th.* About one-half of the liquid in his chamber is found to be muco-pus. *7th.* He is very low and does not take food well. His pulse is weak and rapid and great anxiety is felt about him. He attempts to assault his wife who comes to visit him, because she desires him to take food. It is impossible to obtain any of his urine for examination, as he passes it in bed. He frequently soils himself and requires the greatest amount of personal care. His condition is very wretched. *10th.* Is much better and takes food well. The orchitis is subsiding. There is no abdominal tenderness, and he says that he is in "perfect health." Since yesterday he has taken gruel, milk toast, and egg; previously took only liquids. *14 $\frac{1}{2}$.* His urine is intensely alkaline, contains pus and is of a horrible odor. His bladder is washed out with a weakly carbolized solution. He bears the operation well and expresses himself, half an hour afterwards, as feeling very comfortable. He takes milk punch regularly. Lives almost exclusively upon milk; takes mucilaginous drinks in which citrate of potash is dissolved, *ad libitum*.

From the *16 $\frac{1}{2}$* until the *21st* he was in a highly critical condition. During this time, an abscess formed in the right side of the scrotum and discharged anteriorly a little above the testicle. The discharge was of an intensely offensive odor. The abscess cavity was syringed out with a weakly carbolized solution. It was difficult to keep him comfortable, owing to the constant dribbling of urine. His genitals and thighs were excoriated. *24 $\frac{1}{2}$.* There is a small but constant discharge of pus, and considerable induration of the testicle still exists. Dribbling of urine continues; expectoration is profuse and of a bad odor. He expectorates upon his person, the floor, and bed. He

has a large bed-sore over the sacrum which developed with great rapidity.

From the last date until *November* he seemed to suffer from acute pain in the back, although in reply to questions he said that he had no pain, and that he felt well. He took very little solid food, but plenty of milk-punch, milk, and gruel. Required constant personal attention night and day; was visited twice by his father. He knew him, but would not converse; showed irritation when pressed to do so, and shrieked aloud; threw himself against the wall in the presence of his father and hurt his back. His bed-sore rapidly enlarged, and finally assumed immense proportions. Large sloughs required removal. He became emaciated and constantly lost ground physically.

November 1st. He requires the utmost personal attention and is slowly failing. His bed-sore has not enlarged, but is becoming deeper. Death at an early day is apprehended. *5th.* The destructive process has been arrested. The slough has separated except in the centre, leaving a sore irregular in outline and about 3 x 4 inches in size. A portion shows reparative action. *18th.* Contrary to all expectation, improvement continued in the bed-sore and in his general physical condition, though there was none in personal habits.

December 29th. He has attacks of diarrhoea every few days, which add greatly to the trouble of caring for him.

January 7th, 1882. Is more quiet and far less irritable than formerly. His appetite is good and he is gaining in flesh. The bed-sore is no larger than a silver dollar. He is able to sit up and take his meals in the dining room. His appetite is voracious; gait feeble. *30th.* He spends the most of his time in reading and expresses much pleasure at being no longer confined to bed.

April 3d. Has steadily improved since last note. Is quiet, orderly, and usually pleasant. He has, however,

no appreciation of his past or present mental condition, and asks repeatedly to be examined and sent home. He does not express extravagant delusions. He addresses an envelope in a business-like style.

May 18th. Is quiet and sits by himself in his room much of the time. Is given to gesticulating. 19th. Visited by friends and demands that he be removed from the institution. His conversation is coherent; his statements plausible; he shows scarcely any difficulty in articulating; can stand erect with his eyes shut and moves about easily, showing little ataxia. He executes fine movements with considerable precision.

June 3d, 1882. Removed on trial.

March, 1883. Returned to the institution after an absence of nearly nine months. During the time he made a pretence of practising law, but was unable to accomplish much. In a newspaper notice in respect to his condition, published several months previous to his return, it was stated that his mind had improved, but that he still gave ample evidence of "being out of balance." For several months previous to readmission he made himself a great annoyance in the courts by issuing fictitious papers and instituting law suits against one person and another. He also insisted upon his right to address the court in season and out of season. On his return he was irritable and spoke to no one. He remained for about a fortnight moody and preoccupied, talking little and taking a very small quantity of food. *March 15th.* Weight 130½ pounds.

May 21st. He converses but little, but seizes every opportunity to scold the medical superintendent for his detention, and uses profane language. He sits alone with bowed head, and does not speak.

November 8th. Is at times menacing and threatening;

spends much time in writing or printing; is cross when asked to exhibit his manuscript.

December 14th. A table knife is found secreted on his person. He replies evasively when questioned as to what he purposed doing with it.

March, 1884. His bodily health is as good as at any time since his return. He is tolerably pleasant toward his associates unless annoyed, but he denounces the officers for his detention in the institution. There is some clumsiness in articulation, thought to be a natural condition. None of the former thickness and indistinctness is noticeable. He gets about easily, takes long walks daily in the open air, and shows no inco-ordination of muscular movement. He refuses to permit the physician to make any investigation of his condition, and brushes his hand away when he endeavors to examine his pulse. His attendant succeeds in counting it and reports the number of beats per minute to be 98. He also induces him to stand still and to walk both backwards and forwards with his eyes closed, and finds that he performs these acts with perfect ease. His printing and writing are distinct.

The query has naturally arisen whether it might be possible by artificial means to cause a destruction of tissue in some part of the body and thereby arrest the progress of the disease. As will be seen from the case cited from Pliny Earle, the earlier American alienists were of this opinion. Voisin has reported several cases in which improvement followed upon the use of vesicatories, and has claimed some cases of recovery therefrom. L. Meyer¹ has lately revived the old method for which so much was claimed by Jacobi. He shaves a half-hand-sized space over the great fontanelle. Into the centre of this space he rubs a circle, about the size of a quarter, with antimonial

ointment. This is repeated at the end of twenty-four hours, using a piece of ointment the size of a pea. After the first energetic application of the ointment, the reddened surface is covered with a linen compress smeared with the same ointment. The second friction is done more carefully. These two frictions usually prove sufficient. In the course of three or four days tumefaction of the scalp spreads, usually to the face, rarely to the occiput or nucha. The pustules resulting are small, and dry rapidly. After the swelling is intense, it may be covered with warm poultices. The suppuration is so abundant in a few days that the integument is separated and sloughs off spontaneously, which takes fifteen days; too resistant adherences are destroyed by scissors or caustic. Baths are forbidden. For two or three months the wounds are treated with basilicon ointment. When the suppuration becomes extensive, the symptoms of cerebral pressure disappear. The periosteum may be affected, and exfoliation of the bone occur; to these Meyer attaches no importance, although Sander¹ lays great stress upon them. Of fifteen patients thus treated, eight recovered, but one relapsed after two years; improvement was manifest in all the cases treated. Olbeke² has had somewhat similar experience, although not so favorable, from the use of an ointment composed of hydrarg. bichlor., powdered cantharid., liq. stib. chlor., of each one part; ung. basil., four parts. Of the five patients thus treated, two died rapidly without change; two improved physically, but not mentally, and death followed a few months after the cicatrization of the wound. In the fifth case there was a decided change in the motor symptoms, but dementia continued its course, the patient dying five and a half years after.

Such procedures seem worthy of trial in an affection so

¹ Allgemeine Zeitschrift für Psych., 1878.

² Allgemeine Zeitschrift für Psych., 1881.

fatal as paretic dementia, but he who attempts them in the United States must be ready, from the sentimental tendencies which are at present much too prevalent, to face a charge of cruelty, and prepared for all sorts of misrepresentation. If such measures are to be adopted, the full consent of the patient's friends should be obtained.

For the bibliography of this subject, as well as for the above observations upon treatment, I am indebted to Dr. J. G. Kiernan.



